





These composite bulls are very growthy, muscular and vigorous. This is expected due to a high degree of heterosis and the fact that they are from high performing cattle.

The question is, "Will they sire cattle and provide proven uniformity of carcass quality?".

The second and third generation cattle are proof that the composite buils and composite cows will be very useful by delivering genetics for carcass quality through breeding stock that is heat to lerant and highly active.

Calf crops can now be bred to meet carcass specification to marbling, muscling, and cutability.

Brahman blood in these cattle is reduced by 50% from 3/8 to 3/16. Steers from these bulls are now being fed and evaluated.

The science behind the Adams Ranch composites comes from the USDA Meat Animal Research Center.

It is used by the King Ranch and Leachman successfully. Nearly all poultry and pork is produced this way. Ten years form now most beef will come from some sort of composite.

This will not eliminate purebreds as they are necessary for the composites.

## Dr. Tim Olson - Geneticist

Univ. of Fla.

"The advantage of a new composite breed over a long established breed is that, if inbreeding is avoided, the new breed should, in theory, exhibit heterosis for a number of generations. The heterosis would be expected to be expressed in better cow fertility and calf survival rate and increased growth rate of the calves, due in part to the in- creased milk yield of the crossbred dams."

Ronnie Green - Geneticist Colorado State University

" Composites allow producers to utilize heterosis, breed complementary and consistently of production simultaneously."

> Larry Cundiff - USDA Meat Animal Research Center

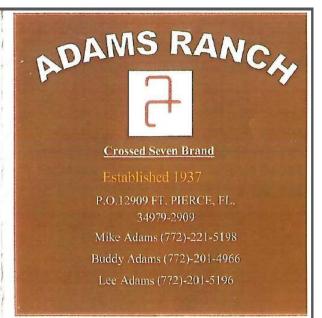
"Heterosis was found in one study to increase weaning weight per cow exponentially 23%."

The use of composites and commercial cows.

ARRAB and ARGEL bulls can be mated to commercial cows with ARRAB bulls mated to females from ARGEL bulls and ARGEL bulls mated to females from ARRAB bulls in a crisscross program.

ARRAB bulls will improve quality of Brahman cross cattle. ARGEL will add muscle and growth to British type cows.

ABEEF bulls are a good balance of quality and muscle and will fit most cow herds. ABEEF meet the specification of 1/4 continental, over 1/2 British, less than 1/4 Brahman.



ARGEL® ARRAB® ABEEF®
Gelbvieh 1/2 Red Angus 1/2 Gelbvieh 1/4
Hereford 5/16 Hereford 5/16 Red angus 1/4
Brahman 3/16 Brahman 3/16 Brahman 3/16

Composite cattle will be as important to the commercial cattle industry as hybrid seed was to farming. This is due to the use of heterosis and hybrid vigor.

Carcass specifications can be met with composite bulls genetically designed for specific traits. These bulls are now available for high cutability, marbling, and muscle.

Composites will not replace or be a substitute for the established breeds, because the established breeds are the building blocks for the composites.

The three main advantages of composites.

- A. Maintain hybrid vigor.
- B. Complementary. You can combine red meat, marbling, and heat tolerance.
- C. Uniformity. You can avoid extreme types of bulls.

## Adams Ranch Composites and their use on Commercial cows

Shown here, one year old bulls that are similar in color, type and appearance. However they are genetically different and can be used to upgrade quality grade, or yield grade while maintaining heterosis.



ARRAB 1/2 RED ANGUS 1/2 BRAFORD



ABEEF 1/4 GELBVIEH 1/4 RED ANGUS 5/16 HEREFORD 3/16 BRAHMAN. CROSS OF ARGEL AND ARRAB



ARGEL 1/2 GELBVIEH X 1/2 BRAFORD



ABEEF ABEEF X ABEEF







Composite crosses reach puberty early, milk well and are very fertile.

Heterosis improves maternal traits as proven by Brahman-Hereford F-1 hybrids.







These bulls are available in quantity or small lots. They are pasture raised. All are tested for weaning weight, semen checked, and ultrasound for ribeye and marbling.