

Growth Traits in the Angus–Brahman Multibreed Herd of the University of Florida

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The Angus–Brahman multibreed herd of the University of Florida was established in 1988 with the purpose of gathering information on traits of economic importance in a population composed of purebred and crossbred animals managed under similar environmental conditions. The mating plan required crossing sires from six breed groups with dams of these same six breed groups:

- 1 = Angus (A)
- 2 = .75A .25B
- 3 = .5A .5B
- 4 = .25A .75B
- 5 = Brahman (B)
- 6 = Brangus (5/8A 3/8B)

The purpose of this mating strategy was to obtain genetic information for sire groups, dam groups,

the combining ability of sire groups and dam groups (heterosis), and the combining ability of individual sires and dam groups (sire combining ability). The table below presents means of birth weights and weaning weights (adjusted to 205 days) of the 36 breed-group-of-sire by breed-group-of-dam combinations.

The total number of bulls with progeny was 73:

- Angus = 15
- .75A .25B = 7
- .5A .5B = 8
- .25A .75B = 10
- Brahman = 18
- Brangus = 15

The number of progeny per breed-group-of-sire by breed-group-of-dam combination ranged from 11

Breed Group of Dam		Breed Group of Sire						Mea
		1	2	3	4	5	6	
1	BW	67	78	72	82	86	74	75
	W	407	452	417	458	482	443	436
	W							
2	BW	68	73	70	79	76	71	73
	W	455	446	468	504	489	453	469
	W							
3	BW	67	76	74	81	80	76	76
	W	476	502	477	476	504	498	490
	W							
4	BW	65	67	68	74	74	76	71
	W	470	450	487	479	495	496	481
	W							
5	BW	73	72	70	74	74	76	74
	W	485	454	422	435	442	471	450
	W							

Birth weights (BW, lb) and weaning weights (WW, lb, adjusted to 205 days of age) of calves in the Angus–Brahman Multibreed Herd of the University of Florida by breed-group-of-sire by breed-group-of-dam combination.^a

to 172. The means in the table of BW and WW can be looked at individually (i.e., breed-group-of-sire by breed-group-of-dam combination), by breed group of sire (vertically), and by breed group of dam (horizontally). The last row and column contain the breed group means (the last row for sires, and the last column for dams). This table shows that (1) the sample of Brahman, Brangus, and crossbred bulls used (except .5A .5B bulls) produced calves with heavier BW and WW than Angus bulls; (2) there was individual heterosis for both BW and WW (especially evident in Row 1,

Angus dams mated to bulls of all six breed groups); (3) there was also maternal heterosis for both BW and WW (reached a maximum in dams of Group 3, which were mostly F₁ dams), e.g., see Column 1 (Angus sires across dams of all breed groups); and (4) dams from Group 3 had (as expected from their high maternal heterosis) the largest mean WW, followed closely by dams from Group 4 (.25A .75B), which performed better than both Brangus dams and .75A .25B dams (Group 2). Angus and Brahman dams had calves with the lowest WW (probably largely due to lack of maternal heterosis).