

Limousin-Angus Crossing Strategies

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Whether you're a commercial producer crossing Limousin and Angus (or Red Angus) or a seedstock producer building Lim-Flex animals, knowledge of each breed's strengths and weaknesses is a prerequisite to development of selection strategies for making superior crosses. While generally Limousin and Angus are the ideal complement for one another, hybrids constructed from superior and complementary parents are of far greater value than those from parents with genetic problems.

Within each breed, knowledge of Limousin, Angus and Red Angus EPD percentile rankings provide useful benchmarks for understanding where animals rank as evaluated by their respective performance programs. Table 1 provides percentile-ranking information for active Limousin, Angus and Red Angus sires based on each breed's spring 2003 national cattle evaluation. As a word of caution, values in this table can only be used to determine the within breed rankings of animals, and should not be used to compare expected performance across breeds. When combined with the electronic sire search tools on each breeds web site, EPD percentile-ranking information is extremely useful for identifying sires with multi-trait superior within each breed.

In order to build the best commercial crosses or genetically elite Lim-Flex animals, superior Limousin and superior Angus (red and black) genetic inputs should be matched using EPDs and common sense, and blended in a complementary way according to selection objectives determined by end-product and maternal targets. Since the whole purpose of crossbreeding and/or use of hybrid seedstock is to genetically overcome within-breed antagonisms among traits and to exploit and manage heterosis, careful selection of genetics from each breed is essential to building the best crosses.

In general, Angus cattle are enhanced by the muscle, growth, efficiency, hardiness and percent retail product advantages of crossing with Limousin. Conversely, the early puberty, low birth weight, marbling (depending upon the market) and fleshing ability of Angus generally complement Limousin cattle. Both breeds are fundamentally strong in calving ease, survival, growth rate, traits associated with convenience and have moderate levels of milk and frame size.

However, no breed, hybrid or individual animal is perfect. All populations of cattle contain lines and individual animals with shortcomings that limit their usefulness or at the very least suggest complimentary strengths that should exist in mates. The key to successful crossing is matching mates (sires and dams) that complement one another as opposed to magnifying (e.g. stacking pedigrees) potential problems.

In most maternal and mainstream market situations, Angus with proven genetic merit for traits such as early puberty, quality grade, docile temperament and moderate size are better matches for most Limousin as compared to Angus lines representing late puberty, low marbling, wild behavior and extremes in size. Conversely, Limousin genetics for muscle, growth, docility and sensible levels of birth weight, milk and frame size are more complimentary to most Angus as compared to genetics for light muscle, low growth, nervous disposition, high birth weight and extremes in milk and frame (low and high). The moral of the story is not to mix parents or lines from each breed with the same serious weaknesses.

By design, crosses of Limousin and Angus, including offspring of Lim-Flex seedstock, are primarily suited for mainstream target markets calling for an optimum combination of muscle and marbling. Because the range in percent blood for Limousin and Angus can vary in commercial rotational crossbreeding with purebreds, and for Lim-Flex (from 25 percent to 75 percent), the most versatile and profitable animals will likely result from superior genetics for yield and quality grade represented by the cross. In other words, superior crosses are not likely to result from crossing low-marbling, light-muscled Angus with light-muscled, low-marbling Limousin. For specialized maternal situations, it makes sense to build commercial crosses and Lim-Flex animals from Limousin and Angus parents that are above each breed's average for scrotal circumference, have reputations for calm docility, possess adequate fleshing ability and are within optimum ranges for milk and mature size.

Professional commercial crossbreeders as well as producers of registered Lim-Flex animals should seek to combine truly superior and proven genetics from both the Limousin and Angus breeds (red or black) according to targeted performance objectives. EPD profiles and associated percentile rankings of both the Limousin and Angus inputs should be matched, so as to complement potential areas of weakness and stack pedigrees for desired strengths in resulting offspring. Electronic sire selector tools offered on each breed's web site make it easy to quickly identify sires with multi-trait superiority. Breeders should also use accuracy values that accompany EPDs from each breed to manage risk associated with selection. In the near future, multi-breed genetic predictions that account for the genetic merit of Angus and Red Angus parents promise to arm breeders with more powerful information to produce reliable hybrids.